

In 1973 when I was touring in Vellore division as Conservator of Forests I had the blackbuck population counted by the Rangers and Foresters as news came that they had multiplied. The count came to 11 animals. After that I lost track of the population there till June 1982 when the present Chief Wildlife Warden (Mr. K. Shanmuganathan) took the trouble to have the blackbuck counted and informed me in particular that there were 92 animals in Alliyalamangalam Reserved Forest.

When I mentioned this interesting experience to Dr. Rauf Ali, formerly of the Bombay Natural History Society and Indian Institute of Science, Bangalore, he suggested that I report this to you for record and publication as

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it is a useful information on the longevity and fertility of blackbuck under natural conditions. It was nearly 14 years since an adult male was added to the original three females. Of course another female was also introduced with the male as already mentioned. Now two points come up for consideration. Firstly, from 1950 to 1968, over a period of atleast 15 years the three females had gone without a male and in 1968 when I introduced the male I had doubted if they would be fertile. But contrary to my misgivings they had remained fertile and readily multiplied. Secondly, this seems to be the only authentic record of three blackbuck females living for at least 15 years under natural conditions.

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### 3. HORN GROWTH IN BLACKBUCK (With a text-figure)

While techniques such as tooth-eruption, replacement, and wear help estimation of age of mammals to the accuracy of months, for their age determination in the field, a biologist too often will be content with age categories such as fawn, adolescent, sub-adult, adult, and old. The growth of antlers in deer such as barasingha (Martin 1977) and horn growth in sheep (Taber 1971) and blackbuck (Mungall 1978) were used as criteria for age estimation in the field. The horn growth of a blackbuck fawn, *Kiran*, which was observed for a period of 2 years and 3 months since its birth is presented in this paper.

A fawn of 3-4 days old was captured by a cultivator of Kolpur village in Mahabubnagar District of Andhra Pradesh from jowar fields on 19-2-1978. This fawn, *Kiran*, after being

tamed for over 3 months by him, was brought to the well fenced Mahavir Harin Vanasthali Blackbuck Sanctuary in Hyderabad by the D.F.O. (Wildlife) of Achampet on 2-6-1978. From then onwards its horn growth was observed through 4-4-1980. The horn length was measured straight from the base to its tip. The number of rings added in the horn since the previous observation was also recorded. Further records could not be made as the animal died.

### RESULTS

The addition of rings in the horns over a period of time is shown in fig. 1. Till it was 5 months old there was no sign of horn growth. Later bumps appeared on the head which were

the first indications of horn development. When it completed 8 months, it had the first ring and the horns measured 3 cm. From then onwards, an average of 0.75 ring/month was added till the age of 15 months. At this stage the first spiral was complete with 6 rings and

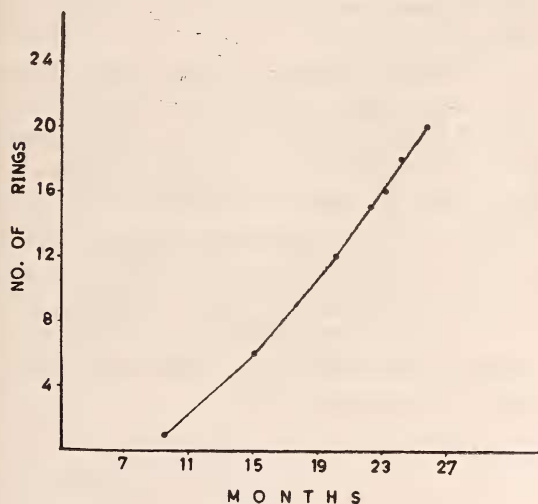


Fig. 1: Horn development in *KIRAN* as an index of age.

the horns were 15 cm long, the left horn being slightly longer than the right. The average of horn length till that time was 1.5 cm/month. For the next six rings it took only 5 months —

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an average of 1.2 rings/month and the average horn growth rate 2.0 cm/month. During the next 5 months on an average 1.60 rings were added per month. The growth rate during this period showed an increase of 1.8 cm/month. By this time the age was 25 months and the second spiral was complete which earned 14 rings. The total horn length was 34 cm, the left horn 0.5 cm longer than the right.

The horn growth pattern is comparable to that of the horn growth of blackbuck described by Mungall (1978) for the Texas population, which also showed two complete spirals at the age of 2 years. The present study, though there is lack of sufficient data, suggests that the number of rings in the horns would probably help better in the estimation of age as against the number of spirals.

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